

## REMARKS

Claims 42, 62-66, and 84-96 are pending in the application. No amendment to the claims is made by the present communication. Instead, as requested by the Examiner, Applicants hereby make a species election, with traverse, for further prosecution on the merits. Accordingly, Applicants submit that the present communication is proper under 37 CFR § 1.116. In view of the following remarks, reconsideration of both the species restriction and the constructive election of claims 42 and 62-66 is respectfully requested.

### *I. Restriction/Election Requirement*

On page 2 of the Office Action, the Examiner has asserted that the application contains claims directed to the following patentably distinct species:

Species I: drawn to first embodiment having a generic method of making a subassembly for a light emitting panel having a specific material and structure of semiconductor group IV nanoparticles.

Species II: drawn to second embodiment having a generic method of making a subassembly for a light emitting panel having a semiconductor group IV nanoparticles with specific structure of the light emitting layer including electroluminescent layer as well as photoluminescent layer that are independent from using the specific material and structure of the nanoparticles themselves.

In support of the species restriction, the Examiner asserts that “the species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species” and that “there is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics.” Office Action, p. 3. According to the Examiner, claims 42 and 62-66 read on Species I, and claims 91-96 read on Species II. Although the Examiner has specifically requested election of a single disclosed species, the Examiner has constructively elected claims 42 and 62-66 for prosecution on the merits. Office Action, pages 3 and 5.

For the reasons discussed below, Applicants respectfully traverse the species restriction.

According to MPEP § 803 I, there are two criteria for a proper requirement of restriction:

- (A) the inventions must be independent or distinct as claimed; and
- (B) there would be a serious burden on the examiner if restriction is not required.

As further stated in this section of the MPEP, in making a restriction requirement, the Examiner “must provide reasons and/or examples to support conclusions.” In particular, a *prima facie* case of serious burden is shown only where the Examiner provides an “appropriate explanation of separate classification of separate status in the art, or a different search as defined in MPEP § 808.02,” emphasis added.

Applicants respectfully traverse the species restriction because Species I and Species II are not distinct. In addition, even if the species were distinct, the Examiner has failed to establish a *prima facie* case of serious burden as to why restriction between these species must be required.

A. Species I and Species II are not distinct.

According to MPEP § 806.05, where two or more related inventions are claimed, the principal question to be determined is whether or not the inventions as claimed are distinct. If they are not distinct, restriction is never proper. According to MPEP § 806.05(j), two related inventions are distinct if:

- (A) the inventions as claimed do not overlap in scope, i.e. are mutually exclusive;
- (B) the inventions as claimed are not obvious variants; and
- (C) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect.

Thus, if the inventions of Species I and Species II fail to meet any of these three requirements, then the species are not distinct. With respect to the requirement of mutual exclusivity, MPEP § 806.05 further states that:

Related inventions in the same statutory class are considered mutually exclusive, or not overlapping in scope, if a first invention would not infringe a second invention, and the second invention would not infringe the first invention.

Thus, if the inventions of Species I and Species II fail to meet either of these two requirements, then the species are not mutually exclusive.

Applicants respectfully submit that Species I and Species II are not distinct because they are not mutually exclusive. As discussed above, each of the claims asserted to read on Species II (claims 91-96) requires the very same method steps of claim 42, a claim which is asserted to read on Species I. Thus, an invention under Species II would necessarily infringe an invention under Species I. Accordingly, the species are not mutually exclusive and cannot be considered to be distinct. Consequently, Applicants submit that restriction between Species I and Species II is improper.

B. The Examiner has failed to establish a *prima facie* case of serious burden.

As discussed above, a *prima facie* case of serious burden requires that the Examiner support his or her conclusions with an appropriate explanation of separate classification of separate status in the art, or a different search. On page 3 of the Office Action, the Examiner has done no more than simply conclude that there is an examination and search burden associated with Species I and Species II. Mere conclusions unsupported by any reasoning, examples or explanation are insufficient to meet the Examiner's evidentiary as set forth in the MPEP. For this additional reason, Applicants submit that the restriction between Species I and Species II is improper.

In summary, because Species I and II are not distinct, and because no *prima facie* case of serious burden has been established, Applicants respectfully submit that the species restriction, and the Examiner's constructive election of claims 42 and 62-66, are improper. Accordingly, Applicants respectfully request that the species restriction be withdrawn and that each of pending claims be fully examined on the merits.

C. Claim 91.

With respect to claim 91, Applicants further note that although the Examiner has grouped this claim into Species II, it is more appropriately grouped into Species I and, therefore, should be examined with claims 42 and 62-66.

*II. Claims 91, 93, 94, and 96*

As a final matter, Applicants respectfully submit that, at the very least, claims 91, 93, 94, and 96 are patentable over the cited references of record: U.S. Patent Application Publication No. 2003/0047816, filed by Dutta (“Dutta”), U.S. Patent Application Publication No. 2003/0080677, filed by Mikhael *et al.* (“Mikhael”), U.S. Patent No. 6,918,946 issued to Korgel *et al.* (“Korgel”), and U.S. Patent Application Publication No. 2003/0094626 filed by Duggal *et al.* (“Duggal”).

Applicants respectfully submit that neither Dutta, Mikhael, Korgel, nor Duggal teaches or suggests each and every element recited in claims 91, 93, 94, and 96. Specifically, nothing in these references teaches or suggests that the recited nanoparticles may form a monolayer (claim 91); that the light-emitting assembly comprises separate electroluminescent and photoluminescent layers (claims 93-94); or that the light-emitting layer comprises the claimed density of nanoparticles (claim 96). Because none of these references alone or in combination teaches or suggests each and every element of claims 91, 93, 94, and 96, Applicants respectfully submit that these claims are patentable over the cited prior art references. Accordingly, Applicants respectfully request the allowance of these claims.

In view of the foregoing remarks, reconsideration and favorable action on all claims are respectfully requested. If any matters remain open after consideration of this response, the Examiner is invited to contact the undersigned by telephone at the number set forth below so that a prompt disposition of the application can be achieved.

Respectfully submitted,

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FOLEY & LARDNER LLP  
Customer Number: 71921  
Telephone: (608) 258-4305  
Facsimile: (608) 258-4258

By



Michelle Manning  
Attorney for Applicant  
Registration No. 50,592